Effect on Negative Laparoscopy Rate in Chronic Pelvic Pain Patients Using Patient Assisted Laparoscopy

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ABSTRACT

Objective: To determine the value of Patient Assisted Laparoscopy (PAL) in the diagnosis of pelvic pain.

Methods: One hundred patients with pelvic pain were assessed by the procedure of Patient Assisted Laparoscopy to determine the cause of chronic pelvic pain.

Results: Of the 100 patients with pelvic pain, 12 patients were not assessed due to technique failure, which included reaction to the carbon dioxide gas, inadequate visualization due to abdominal adhesions or failure to enter peritoneum. Of the remaining 88 patients, 61 had endometriosis; 16 had adhesions not associated with endometriosis; five had hernias; one had occult bowel cancer; one pseudo-stone from previous cholecystectomy; one had pain as a result of staples used at hysterectomy and one patient had chronic Crohn's disease. Two patients had no demonstrated interabdominal cause for their symptoms.

Conclusion: In contrast to the well published rate of 35% negative laparoscopy in those patients with pelvic pain when examined under general anesthetic, Patient Assisted Laparoscopy decreased the negative laparoscopy rate to less than 3%. This methodology was also of benefit in giving the patient a better understanding of the cause of her pain and the need for therapy.

Key Words: Patient assisted laparoscopy, Chronic pelvic pain.

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INTRODUCTION

Patients presenting with chronic pelvic pain, defined as non-menstrual pain in the pelvic area for longer than three (3) to six (6) months, have often been investigated without significant objective findings to explain the pain. These cases account for 10% of visits to the gynecologist.[1] As a last resort, laparoscopy under general anaesthetic has been offered. In these instances, a diagnosis based on visual inspection by the surgeon, without confirmation by the patient, has been established in 70% of patients **(Table 1)**.[2,3] Thirty percent of these cases, however, have a negative laparoscopy as defined by no visible pathology. Howard[4] has characterized these patients as 1) nothing wrong; 2) pain is in her head and patient is referred to a psychiatrist; 3) a neurolytic procedure, such as uterine nerve transection or presacral neurectomy is recommended; 4) the only thing left to do is a hysterectomy; 5) nothing can be done and the woman must learn to live with the pain.

Many patients viewed these conclusions as unacceptable as they were never given the opportunity to "show the doctor" exactly where the pain was.

To answer this need to "show the doctor" the site of her pain, a technique of performing laparoscopy while the patient was fully conscious was developed. This procedure is referred to as Patient Assisted Laparoscopy (PAL).

MATERIALS AND METHODS

One hundred patients entered the study with a diagnosis of pelvic pain. All tests including ultrasound, CT, and, if ordered, MRI were negative. If performed, previous laparoscopy under general anaesthesia revealed no cause of the pain. All patients underwent Patient Assisted Laparoscopy. This procedure entailed the following: Emla cream was placed to the planned subumbilical and suprapubic trocar sites two hours prior to surgery. One percent (1%) Xylocaine was infiltrated with a 25-gauge needle to produce a field block of the abdominal muscles and peritoneum in the proposed path of the trocar. A 4 mm Storz trocar and laparoscope were inserted subumbilically and a second 3 mm trocar and probe suprapubically. A maximum of 600 cc carbon dioxide gas was instilled into the peritoneal cavity.

Table 1.
Laparoscopic findings in women with CPP, 1981 - 1994.

	number	%
No visible pathology	521	32%
Endometriosis	502	31%
Adhesions	373	23%
Chronic Pelvic Inflammatory Disease	87	5%
Ovarian Cyst(s)	43	3%
Pelvic Varicosities	5	<1%
Myomata	16	1%
Other	66	4%

A Storz twin video system was used to record patient response so that the responses could be correlated to findings at laparoscopy. The probe was used in a tactile manner to map the area of pain. No Medazolm was used, and small boluses of fentynal were given only upon patient's request. Normal peritoneum was first palpated to establish a control. Other areas were palpated and compared to the control. A diagnosis was not established unless the patient confirmed that the pain produced by palpation reproduced her presenting symptoms.

RESULTS

Of the 100 patients entered into the study, twelve patients were eliminated. The reasons for elimination included retroperitoneal insufflation of gas; reaction to the intraperitoneal gas (i.e., shoulder tip pain); or the inability to visualize due to adhesions **(Table 2)**. Of the 88 remaining patients **(Table 3)**, 61 (69%) had endometriosis confirmed by biopsy; 16 (18%) had adhesions from previous operations or disease other than endometriosis. Five patients (5%) had a direct or indirect hernia. The remaining 6% patients had unusual diagnosis, including a cancer of the sigmoid colon, chronic disease of the terminal ileum, a staple impinging the serosa of the ureter and a pseudostone from spillage of the contents of the gallbladder at time of cholecystectomy.

Only two patients had a totally negative PAL. Further investigations revealed that one of the remaining patients had a myofascial cause for her pain as described by Slocumb.[5] The remaining patient had no discernible cause for the pain she was experiencing.

Table 2.
Cause for PAL failure.

Unable to gain access to peritoneal cavity	3%
Reaction to CO_2 gas	5%
Unable to visualize due to adhesion	3%
Patient unable to tolerate	2%
Percentage of failure	12%

Table 3.
Diagnosis at time of PAL.

	#	%
Endometriosis	61	69%
Adhesions	16	18%
Hernia	5	5%
Other causes	6	6%
No cause found	2	2%

CONCLUSION

Since pain is a symptom that cannot be visualized, but only experienced, it would be reasonable to expect that there would be an advantage to having the patient demonstrate where the pain was located, as well as its physical parameters. Patient assistance during the laparoscopy has several advantages:

1) Patient is able to show the surgeon (and, more importantly, herself) the cause of her pain;
2) Laparoscopic findings can be demonstrated to the patient as the cause of her pain;
3) Treatment can be determined and explained to the patient;
4) The patient can be shown potential complications of therapy;
5) The patient can confirm the result of therapy, i.e., release of adhesions result in resolution of pain;
6) The negative laparoscopic rate can be reduced from 35% to less than 3%.

In contrast to the published rate of a 35% negative laparoscopy when the client is under general anaesthetic, Patient Assisted Laparoscopy (PAL) decreases the negative laparoscopy rate to less than 3%. This methodology also gives the patient a better understanding of the cause of her pain and the need for therapy.

References:

1. Howard FM. The role of laparoscopy in the evaluation of chronic pelvic pain: promise and pitfalls. *Obstet Gynecol Surg.* 1993;48:10-46.

2. Reiter RC. A profile of women with chronic pelvic pain. *Clin Obstet Gynecol.* 1990;33:130.

3. Howard FM. Laparoscopic evaluation and treatment of women with chronic pelvic pain. *J Am Assoc Gynecol Laparosc.* 1994;1:325-331.

4. Howard FM. The role of laparoscopy in the evaluation of chronic pelvic pain: pitfalls with a negative laparoscopy. *J Am Assoc Gynecol Laparosc.* 1996;4:85-94.

5. Slocumb, JC. Neurological factors in chronic pelvic pain: trigger points and the abdominal pelvic pain syndrome. *Am J Obstet Gynecol.* 1984;149:536-543.